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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,554	07/25/2003	Naoki Toge	2003_1000A	9325

513 7590 09/03/2004

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WASHINGTON, DC 20006-1021

EXAMINER

MORGAN, EILEEN P

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/626,554	<b>Applicant(s)</b> TOGE ET AL. <span style="float: right;">1</span>	
	<b>Examiner</b> Eileen P Morgan	<b>Art Unit</b> 3723	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                              |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7-25-03</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### **Claim Rejections - 35 USC § 112**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 1-3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, where is the 'outer rim' and 'inner rim'? On the inner and outer sides of the groove? Aren't there two rim edges on each portion of the end face that the groove divides? What is 'a boundary of said groove?' 'under the condition that' is unclear and does not further limit the claim. Claim 2, 'divided in two' is unclear. What is 'either or both of grain size'? 'interval of arrangement'?

### **Claim Rejections - 35 USC § 103(a)**

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:  
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan-079772 in view of Kusachi et al-6,620,522 and Osenberg-2,826,015.

Japan '772 discloses a cup-shaped grinding wheel with brazed abrasives particles 'arranged under a condition suitable for cutting. Japan '772 does not disclose a groove in the end face or wherein the skirt portion of the brazing material is longer than the average size of the grain. However, Kusachi teaches a cup-shaped grinding wheel wherein abrasive grains are attached by brazing wherein the skirt portion of brazing material is longer than an average size of the grains. Therefore, it would have been obvious to one of ordinary skill in the art at time invention to place the grains of Japan such that the skirt portion is longer than grains, as taught by Kusachi, in order to improve grinding performance (col. 4, line 43).

Osenberg teaches a cup-shaped grinding wheel with a groove in the end face. This groove allows dust and debris to escape from grinding surface. Therefore, it would have been obvious to one of ordinary skill in the art at time invention to form a groove in Japan '772, as taught by Osenberg, in order to easily remove dust and

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debris. Japan discloses that the position of the grains are arranged under a condition suitable for grinding, therefore, the location of the grains relative to the edges and the groove would have been an obvious design expedient dependent on machining parameters.

5. Claims 2,3 rejected under 35 U.S.C. 103(a) as being unpatentable over Japan-079772 in view of Kusachi et al-6,620,522 and Osenberg-2,826,015 as applied to claims above, and further in view of Martin-3,117,400.

Japan '772 does not disclose using different grades of abrasive grains. However, Martin teaches a cup-shaped grinding wheel with varying grades of abrasive grains. Therefore, it would have been obvious to one of ordinary skill in the art at time invention to vary the grain grades in order to produce different grinding effects on the workpieces. The shape of the grains, such as a flat top, would have been an obvious design expedient.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eileen P Morgan whose telephone number is 703.308.1743. The examiner can normally be reached M-Th, Fridays - Work at Home. 2nd Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 703.308.2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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EM  
August 19, 2004

A handwritten signature in black ink, appearing to read 'EPM', with a long, sweeping horizontal stroke extending to the right.

EILEEN P. MORGAN  
PRIMARY EXAMINER